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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,116

10/17/2003

Fumito Nariyuki

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01/11/2007

TAIYO CORPORATION

401 HOLLAND LANE

#407

ALEXANDRIA, VA 22314

EXAMINER

CHEA, THORL

ART UNIT

PAPER NUMBER

1752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/687,116

Applicant(s)

NARIYUKI, FUMITO

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 13, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20061219.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to the communication on October 13, 2006. Claims 15-29 are pending in this instant application.
2. Applicant's arguments with respect to claims 15-29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 15-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The antecedent bases for "the sheet" in claim 1, line 14 and the "photothermographic material" in line 4 are unclear. See the term part of the "sheet". The language in the preamble is "photothermographic sheet material". Therefore, the term "photothermographic sheet material" should be used consistently.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-16, 18, 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167),

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Uytterhoven et al (US Patent No. 6,143,488), and Siga et al (4,332,889) further in view of either Oyamada et al (Pub. No. US 2004/0038156A1) or Yamane et al (Pub. No. U.S. 2004/0058281 A1).

EP'310 discloses a photothermographic material comprising containing silver halide, non-photosensitive organic silver salt, a reducing, binder and a halogen containing compound; wherein the silver halide that can be used is not particularly limit as for halogen composition, and silver chloride, silver chlorobromide, silver bromide, silver bromoiodide and silver chlorobromoiodide may be used. Silver halide can be spectrally sensitized within a desired wavelength depending the characteristics of the light source to be used in the exposure. The material contains a hydrogen bonding, bisphenol reducing agent and development accelerator. See the process on page 53, [0211] to [0215]; silver halide on page 35, [0075]; reducing agent on pages 6-11; hydrogen bonding compounds on page 20-34; development accelerator on page 36, [0082], organic polyhalogenated compound on pages 59-60, [0241] to [0243]; the grain size of the photosensitive silver halide is preferably small in order to suppress turbidity after image formation, which is from 0.01 to 0.15 micron on page 36, [0077]; the chemical sensitization on page 37, [0087]; and spectrally sensitize silver halide to appropriate light source on page on page 36, [0083]. Okada et al discloses an organic polyhalogenated compound of formula (I) in column 2. Uytterhohoeven et al discloses a use of silver halide having content at least 80 mole % to provide a photothermographic material with improved post-stability, and the recording process includes the step of using UV light. See abstract and column 11, lines 15-35. Siga et al disclose the use of bromoiodide having iodide content from 30/70 to 92/2 to provide a photothermographic material with excellent stability. See abstract and column 6, lines 43-68.

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Yamane et al ('281) and Oyamada ('156) each disclose the apparatus used in the present invention. See Oyamada et al, Fig.1 and Yamane et al Fig.1 in comparison with the apparatus of Fig.2.

The additives contained in the claimed material have been conventionally known in the art such as the silver halide composition and the polyhalogenate compound. Moreover, the heat-developable apparatus used in the present invention has been known in Oyamada et al and Yamane. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the apparatus known in Oyamada et al and Yamane to form an image using a material obtained by the combination of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167) Uytterhoven et al (US Patent No. 6,143,488) and Siga et al (4,332,889) with an expectation of success, and thereby provide a process as claimed

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over combination of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167), Uytterhoven et al (US Patent No. 6,143,488) and Siga et al (4,332,889) further in view of either Oyamada et al (Pub. No. US 2004/0038156A1) or Yamane et al (Pub. No. U.S. 2004/0058281 A1) as applied to claims 14-16, 18, 21-29 above, and further in view of Farid et al (US Patent No. 5,747,236) or Asanuma et al (US Patent No. 6,686,140). The applied prior art disclosed in the paragraph 4 above fail to disclose the compound that can be one-electron-oxidized to provide a one-electron oxidation product which releases one or more electrons. The compounds however have been known in Asanuma et al in column 6, Type 1 to Type 5, and Farid in the abstract. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the known compound taught in either Farid et al or Asanuma to provide the material of

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Uytterhoeven et al with high photographic speed and low fog, and thereby provide an invention as claimed.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over combination of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167), Uytterhoven et al (US Patent No. 6,143,488) and Siga et al (4,332,889) and further in view of Oyamada et al (Pub. No. US 2004/0038156A1) or Yamane et al (Pub. No. U.S. 2004/0058281 A1) as applied to claims 15-16, 18, 21-29 above, and further in view of Hirabayashi (US 2002/0123016A1). The applied prior art in the paragraph 4 fails to disclose to expose the photographic material with a specific wavelength of 350 nm to 450 nm, but it has been known in Hirabayashi to use light source having emission wavelength of 350 nm to 450 nm to expose the photographic material that results in image superiority. See abstract and page 1, [0005]. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to expose the material obtained by the combination of the applied prior art above with use light source having emission wavelength of 350 nm to 450 nm to expose the photographic material that results in image superiority.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 15-29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7,105,282 in view of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167), Uytterhoven et al (US Patent No. 6,143,488), and Siga et al (4,332,889). Claim 1-7 of the US Patent No. 7,105,282 is related to the method containing similar step, except not specifying the type of silver halide or polyhalogenate compound which have been known in the photothermographic art such as taught in EP'310, Okada et al, Uytterhoeven and Siga. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a known silver halide and polyhalogenate compound known in the applied prior art to provide a photothermographic material with good storability, and thereby provide a process as claimed.

11. Claims 18-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5, 7-10 of copending Application No. 10/ 768,038 or over claims 1, 3-8 copending application Serial No. 10/448,280 in view of EP 1096310 A2 (EP'310), Okada et al (US Patent No. 5,952,167), Uytterhoven et al (US Patent No. 6,143,488), and Siga et al (4,332,889). Claim 1-7 of the copending applications is related to the method containing similar step, except not specifying the type of silver halide or polyhalogenate compound which have been known in the photothermographic art such as taught in EP'310, Okada et al, Uytterhoeven and Siga. Therefore, it would have been obvious to the

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worker of ordinary skill in the art at the time the invention was made to use a known silver halide and polyhalogenate compound known in the applied prior art to provide a photothermographic material with good storability, and thereby provide a process as claimed

This is a provisional obviousness-type double patenting rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The adding of the “using of an image recording apparatus having an exposure portion and a developing portion” raises new issue, which necessitate new ground of rejections.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *iln*
January 2, 2007

Thorl Chea
Thorl Chea
Primary Examiner
Art Unit 1752